REMARKS

RECORD OF TELEPHONIC INTERVIEW

On Wednesday, April 14th, Applicants' representative and Examiner D'Agosta discussed the present case. After reviewing the case, the Examiner indicated that the subject matter of Claim 7 appeared to be allowable. Applicant have amended the independent claims to include features as recited in previous Claim 6 and Claim 7 where applicable.

Rejections under 35 U.S.C. §103(a)

In the above-referenced Office Action, the Examiner has rejected Claims 1-28 and 30 as being unpatentable over <u>Yokev, et al.</u> (U.S. 5,596,330) in view of <u>Cease, et al.</u> (U.S. 3,681,695). The Examiner has further rejected Claims 1-30 as being unpatentable over the above-combination and in further view of <u>Hane</u> (U.S. 4,804,961). Applicants respectfully disagree. As amended, independent claims 1, 14, 25-28 and 30 (as well as their dependent claims) recite systems, devices (transceivers), methods and a computer program product that use two pluralities of signals in a transceiver loop, one along a forward path and one along a reverse path. The forward and reverse signals have a coherent phase relationship in order to provide amplitude and phase information that is extracted from received signals at one end of the transceiver loop and used to determine transmission path data for

eliminating delay error due to multipath propagation between the transceivers. The propagation path data is used to identify time delay information for signals traveling in a direct path between the transceivers and eliminate or reduce error due to signals traveling in an indirect path.

Yokev, does not teach such a transceiver loop, as in Yokev path TDOA data is determined by multiple base stations. Yokev mentions the multipath problem solved by the present invention at col. 5, lines 21-32, but only reduces multipath by using a large number of phase (delay measurements) or by incorporating the multiple receiver antenna array techniques of the incorporated application referenced in col5. lines 24-26 of Yokev. Yokev mentions that the use of multiple frequencies will eliminate the multipath fading and distortion errors - indicating that the hops of Yokev have substantially different path characteristics (wideband hops) as opposed to the hops of the present invention, which as recited in the claims, have substantially the same path characteristics (narrowband hops). Therefore, Yokev is not indicating the measurement of phase and amplitude over a closely-spaced sequence of frequencies so that direct path delay can be determined in conformity with a received phase and amplitude for each hop and is not identifying from the transmission data a delay time for signals traveling in a direct path between the devices and eliminating error due to signals traveling in an indirect path.

The Examiner mentions that Yokev could operate on phase

coherent signals, but the signals will only be phase-coherent if specifically generated for that purpose. Yokev does not teach phase-coherent signal generation, nor is there a motivation to do so in the system of signal generation, nor is there a motivation to do so in the system of Yokev.

Cease also does not teach or suggest such a system. Cease discloses a multiple input receiver for aligning the phase of received signals in order to constructively combine their power. The receiver of Cease effectively removes phase differences from the multiple inputs of the receiver, which is operating in a manner completely distinct from the claimed invention, as phase and amplitude information are preserved for each received signal so that path characteristics can be determined therefrom. Therefore Cease does not identify a direct-path delay while reducing or eliminating error due to indirect path propagation, either.

Hane also does not teach or suggest the system of the present invention or the devices, methods and computer program product claimed in conjunction therewith. Hane does not treat the multi-path problem at all, and uses multiple frequencies to resolve only ambiguities. Hane does not use amplitude and phase data to identify direct path delay and reduce or eliminate error due to indirect path signals.

The other references made of record, but not relied upon by the Examiner do not teach such multi-path direct path distinction, with the exception of Parl, et al. (U.S. 6,259,404). Parl teaches an

alternative technique in which base stations use received signal information to maximize a locator function in order to estimate the direct path signal. <u>Parl</u> does not teach the use of a transceiver loop with phase coherent signaling in order to determine phase and amplitude information for a plurality of carrier signals that have substantially the same propagation characteristics, as recited in the Claims.

Therefore, Applicants believe that the rejections under 35 U.S.C. §103(a) are overcome.

CONCLUSION

In conclusion, Applicants respectfully submit that this Response, in view of the Remarks offered in conjunction therewith, is fully responsive to all aspects of the objections and rejections tendered by the Examiner in the Office Action. Applicants respectfully submit that they have demonstrated that the above-identified Patent Application, including Claims 1-5, 10-15 and 17-30, is in condition for allowance. Such action is earnestly solicited.

Respectfully submitted,

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